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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/657,803	09/08/2000	Hajime Tabata	0505-0673P	2995

7590 08/25/2003

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EXAMINER

NGUYEN, DUC MINH

ART UNIT	PAPER NUMBER
2643	16

DATE MAILED: 08/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/657,803	TABATA ET AL.
	Examiner	Art Unit
	Duc Nguyen	2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 7-11 and 13-23 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 7-11 and 13-23 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
 

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 7, 8-11, 13-16, 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodama (4,008,408) in view of Davis et al (6,345,102) and Szilagyi et al (6,396,197).

Consider claims 7, 10-11, 17, 19, 22-23. Kodama teaches a piezoelectric speaker comprising a frame having an opening therein (frame 1, fig. 4); a piezoelectric film located on one side of the frame and covering the opening (piezoelectric elements 2, figs. 4-9). Kodama does not teach a laminating film attached to the one side of the frame; and a detachable fastener integrally formed on the laminating film for fastening the piezoelectric speaker to an inner surface of a helmet.

Davis teaches a laminating film (fixing material 32; col. 3, ln. 16-26) attached to the one side of the frame; and a detachable fastener integrally formed on the laminating film for fastening the piezoelectric speaker to a surface of a sun visor (10). Davis does not teach the laminating film covering the piezoelectric film. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to entirely cover the back of the frame (26) with the

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laminating film (fixing material 32; col. 3, ln. 16-26) in order to securely hold the speaker to the sun visor (10).

Kodama in view of Davis does not teach a detachable fastener fastening the piezoelectric speaker to a inner surface of a helmet.

Szilagyi teaches a detachable fastener fastening the piezoelectric speaker to a surface of a helmet (abstract; col. 1, ln. 15-27, ln. 66 to col. 2, ln. 19, ln. 39-49; col. 5, ln. 28-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Szilagyi into the teachings of Kodama in view of Davis in order to provide a piezoelectric speaker that is easily secured to an existing structure.

Consider claim 8. Szilagyi further teaches the frame supports the piezoelectric film speaker in a curved state (fig. 1, frame 14 having base portion 20 and top portion 22).

Consider claim 9. Szilagyi further teaches the curvature of the frame has a radius of curvature in a range of 210mm to 360mm (fig. 8-9 show piezoelectric speakers being used in bicycle helmet which inherently has a radius of curvature in a range of 210mm to 360mm).

Consider claims 15-16, 18. Kodama teaches a piezoelectric speaker comprising a frame having an opening therein (frame 1, fig. 4); a piezoelectric film located on one side of the frame and covering the opening (piezoelectric elements 2, figs. 4-9). Kodama does not teach a laminating film attached to the one side of the frame; and a detachable fastener securely formed on the laminating film at a position overlapping edges of the piezoelectric film but not overlapping the opening for fastening the piezoelectric speaker to an inner surface of a helmet.

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Davis teaches a laminating film (fixing material 32 does not overlap the opening of frame 26; col. 3, ln. 16-26) attached to the one side of the frame. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the fixing material (32) as taught by Davis with the piezoelectric speaker as taught by Kodama in order to securely hold the speaker to the sun visor (10). With this combination, the detachable fastener securely formed on the laminating film (32) at a position overlapping edges of the piezoelectric film but not overlapping the opening for fastening the piezoelectric speaker to a surface of a sun visor (10).

Kodama in view of Davis does not teach a detachable fastener fastening the piezoelectric speaker to a inner surface of a helmet.

Szilagyi teaches a detachable fastener fastening the piezoelectric speaker to a surface of a helmet (abstract; col. 1, ln. 15-27, ln. 66 to col. 2, ln. 19, ln. 39-49; col. 5, ln. 28-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Szilagyi into the teachings of Kodama in view of Davis in order to provide a piezoelectric speaker that is easily secured to an existing structure.

Consider claim 13. Davis' col. 3, ln. 16-26 reads on the limitations of this claim.

Consider claim 20. Szilagyi further teaches the frame supports the piezoelectric film speaker in a curved state (fig. 1, frame 14 having base portion 20 and top portion 22).

Consider claims 14, 21. Kodama further teaches the limitations of this claim in (fig. 3, frame pieces (1 and 4) and the piezoelectric element (2) is held by the pair of frame pieces 1 and 4 at the edges).

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***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Nguyen whose telephone number is (703) 308-7527.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Kuntz, can be reached on (703) 305-4708.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314** (Group's Fax numbers)  
**(703) 746-7251** (Examiner's Fax number, only for proposed amendment)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

August 21, 2003

  
DUC NGUYEN  
PRIMARY EXAMINER